APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/345,195	06/30/1999	BENOIT JULES JURION	13237-2425	9936

27488 7590 11/21/2003		EXAMINER
MERCHANT & GOULD		SINGH, RACHNA
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MINNEAPOLIS, MN 55402-0903	ART UNIT	PAPER NUMBER
	2176	

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 09/345,195	**Applicant(s)** JURION ET AL.
	Examiner Rachna Singh	**Art Unit** 2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _02 September 2003_ .

2a)☒ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-5,7-18 and 23-31_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-5, 7-18, and 23-31_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

　　If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____ .

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

　　a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

1.   This action is responsive to communications: amendment, filed 03/31/03;

2.   Claims 1-5, 7-18 and 23-31 are pending in the case. Claims 1, 14, 16, 17, 18,

and 27 are independent claims.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-2, 7-15, 18, 23-24, and 26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sun, US Patent 5,802,482, 09/01/98.

In reference to independent claim 1, Sun teaches a method and system for

processing graphic language characters comprising the following steps:

-Receiving a character from a file system or keyboard of a foreign language with various

combination rules. See figure 6 and columns 1-2. Compare to *"receiving a first*

character of a complex character".

-Determining if the character is part of a valid sequence according to the combining

rules of a foreign language. See column 1-2 and figure 6. Compare to *"determining*

whether the first character may begin a valid sequence of characters for forming

a complex character according to the rules associated with the selected

language".

-Outputting in a display one or more character strings in accordance with said layout

field. See column 8. Compare to *"if the first character may begin a valid sequence*

of character for forming a complex character according to rules associated with

the selected language, accepting the first character for display".

-If the character forms an invalid sequence, signaling an error and prompting the user

for new input. See figure 6. Compare to *"if the first character may not begin a valid*

sequence. . .prohibiting accepting the first character for display".

Sun differs from the claimed invention in that he initially stores the characters in a

header and stores the data structure in memory which is later retrieved by the output

device for display; however, he still determines if the display is part of a valid sequence,

thus it would have been obvious to one of ordinary skill in the art at the time of the

invention to display characters as they are validated as illustrated by Sun. Moreover, as

illustrated in figure 6, Sun receives each character from an input and determines if it is

part of a valid sequence and if it is not it signals an error. If the character is a valid

sequence, it places the character in a register and waits for the next character. It would

have been obvious to one of ordinary skill in the art at the time of the invention to

visually represent this process as it allows a user to see the characters that he is

inputting into the system in conjunction with the additional characters.

In reference to claim 2, Sun teaches receiving a series of inputs and determining

whether the append to the previous characters following language rules (combination

rules). See figure 6. The process taught in reference to claim 1, can be carried out

multiple times as characters are appended to the complex character. See figure 6 and columns 1-2.

In reference to claim 7, Sun teaches prohibiting invalid characters and appending valid characters. See figure 6 and columns 1-2.

In reference to claims 8 and 10, Sun teaches the addition of a simple character to form a complex character. See columns 1-2.

In reference to claim 9, Sun's method allows the user to enter multiple characters for appending to the next. Thus a first character could comprise of two or more characters. See columns 1-2 and figure 6.

In reference to claims 11-13, Sun teaches the system for use in languages such as Thai, Vietnamese, and various other foreign languages. See columns 1-2.

Claim 14 is rejected under the same rationale as claim 1 above.

In reference to claim 15, Sun teaches identifying whether the sequence has ended and if it has the system generates a header and stores it in memory, thus prohibiting the display of any other character. See figure 6.

Claim 18 is rejected under the same rationale used in claim 2 above.

In reference to claim 23, Sun teaches appending a second character if it is part of a valid sequence. See figure 6.

In reference to claim 24, Sun teaches that a correct sequence is validated then displayed to the user on a display screen according to rules of a language. See figure 6.

In reference to claim 26, Sun teaches the addition of the character appended to the current sequence (as in to the right). See figure 6.

5.   Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun, US Patent 5,802,482, 09/01/98 in view of Hetherington et al., US Patent 6,411,948, 6/25/02 (filed 12/15/98).

In reference to claim 16, Sun discloses processing a character entered by a user. Sun does not teach a method of displaying the character even if it is not associated with the selected language; however, Hetherington does. Hetherington teaches that if the character is not a valid character of the language, the input method editor will display the character and wait for an additional character to be added. See columns 15-16 and figures 5a-5f. The rest of claim 16 is rejected under the same rationale used in claim 1 above. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Sun's method of validating character appendages to a sequence of characters with Hetherington's system for displaying the character even when it is not associated with the language since both Sun and Hetherington are concerned with the proper construction of a complex character and displaying a character even when it is not associated with a language allows the system to provide alternatives to the character sequence being represented.

In reference to claim 17, Sun teaches utilizing combination rules of a language when constructing a sequence of characters. Sun's system determines if each character is a valid sequence. Each input is considered as the "last" character in the sequence and it's validity towards the sequence is considered. See columns 1-2 and

figure 6. If the sequence is a valid word, the system terminates the process. Sun does

not teach adding one character at a time if the character does not comprise a valid

sequence; however, Hetherington does. Hetherington teaches continuously adding

characters even if it is a not a valid. Hetherington's method involves a process that

proceeds upon a character being entered (input character) and determines whether the

input character in combination with the other characters forms a valid sequence. If the

characters do not, it waits for a new character until a valid sequence is made. It would

have been obvious to one of ordinary skill in the art at the time of the invention to

combine Sun's method of validating character appendages to a sequence of characters

with Hetherington's system for displaying the character even when it is not associated

with the language since both Sun and Hetherington are concerned with the proper

construction of a complex character.

6.   Claims 3-5 and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Sun, US Patent 5,802,482, 09/01/98 in view of Hetherington (hereafter referred to

as Hetherington2), US Patent 6,272,495, 8/7/01 (filed 4/22/98).

        In reference to claims 3, 25, and 27, Sun does not disclose a state transition

table in which a state is assigned to the characters according to the rules; however,

Hetherington2 discloses a state transition table in which various grammar rules are

given a state number. See figure 18. Hetherington2 teaches regular expression

definitions which define the structure of a system. For example, a word may consist of

2 or more alphabetic characters. The structure of the regular expression definition is a

state transition table. See figure 18. Hetherington2 teaches that grammar files are

often used to define all possible text objects in a natural language processing environment. See columns 23-25. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a state transition table as disclosed by Hetherington2 in the system of Sun in which characters are assigned certain states in order to determine if appending a character to a string makes a valid sequence since it was well known in the art to utilized state transition tables for grammatical rules (see Hetherington2, column 24).

In reference to claims 4 and 30, Sun's system determines whether the entered characters correspond to an ideograph. If not, then the process waits for further character input; otherwise it presents matching ideographs to the user. See columns 1-2 and figure 6. The data entry can be initiated again for the user to enter new characters to begin a second sequence of characters. See figure 6.

In reference to claims 5 and 31, Sun's system does not indicate the use of a state transition table to determine if the second state points to a third transition state representing a reset transition action; however, as Hetherington2 teaches the use of a transition state table in which an action can be terminated upon coming to the end of a text object. See figure 18. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Hetherington2's state transition table into the system of Sun since they both deal with the rules governing languages and their characters.

In reference to claims 28-29, Sun teaches that each character is validated and if it is not part of a valid sequence, an error signal is generated. See figure 6.

Response to Arguments

7.   Newly presented claims 23-31 have been rejected above.

In reference to claims 1, 14, and 18, Applicant argues that Sun does not teach displaying a character and combination to the user. As stated above in the rejections, Sun differs from the claimed invention in that he initially stores the characters in a header and stores the data structure in memory which is later retrieved by the output device for display; however, he still determines if the display is part of a valid sequence, thus it would have been obvious to one of ordinary skill in the art at the time of the invention to display characters as they are validated as illustrated by Sun. Moreover, as illustrated in figure 6, Sun receives each character from an input and determines if it is part of a valid sequence and if it is not it signals an error. If the character is a valid sequence, it places the character in a register and waits for the next character. It would have been obvious to one of ordinary skill in the art at the time of the invention to visually represent this process as it allows a user to see the characters that he is inputting into the system in conjunction with the additional characters.

Applicants further argue that Sun teaches away from the invention in that he allows meaningless data structures to be generated. Examiner disagrees since Sun discloses that a signal error is generated for a character that produces an invalid sequence. Moreover, Sun's system is based on combining rules of a language and does not allow characters that do not meet the rules to be displayed. So while Sun may allow the user to enter a wrong character, he only does so upon notifying the user of the invalid sequence. See figure 6.

In reference to claims 16 and 17, Applicant argues that there is no motivation or suggestion to combine the teachings of Sun an Hetherington. Examiner respectfully disagrees. As stated above, It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Sun's method of validating character appendages to a sequence of characters with Hetherington's system for displaying the character even when it is not associated with the language since both Sun and Hetherington are concerned with the proper construction of a complex character and displaying a character even when it is not associated with a language allows the system to provide alternatives to the character sequence being represented.

Applicant further argues that the teaching of Hetherington2 is nonanalogous art and there is no motivation to combine. In response to applicant's argument that Hetherington2 is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Hetherington2 is. Hetherington2 teaches regular expression definitions which define the structure of a system. For example, a word may consist of 2 or more alphabetic characters. The structure of the regular expression definition is a state transition table. See figure 18. Hetherington2 teaches that grammar files are often used to define all possible text objects in a natural language processing environment. See columns 23-25. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a state transition

table as disclosed by Hetherington2 in the system of Sun in which characters are

assigned certain states in order to determine if appending a character to a string makes

a valid sequence since it was well known in the art to utilized state transition tables for

grammatical rules (see Hetherington2, column 24).

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

US Patent 5,873,111   Edberg   5/10/96

Bishop, F. Avery, David C. Brown, and David M. Meltzer, "Supporting Multilanguage

Text Layout and Complex Scripts with Windows 2000", November 1998, Microsoft

Systems Journal, available:

http://www.microsoft.com/typography/developers/uniscribe/intro.htm.

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time
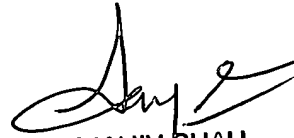
policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

10.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Rachna Singh whose telephone number is

703.305.1952. The examiner can normally be reached on M-F (8:30-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph Feild can be reached on 703.305.9792. The fax phone number for

the organization where this application or proceeding is assigned is 703.872.9306.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is

703.305.3900.

RS
11/12/03

SANJIV SHAH
PRIMARY EXAMINER